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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,859	06/27/2006	Per Johan Anders Nystrom	P19103-US1	1377

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EXAMINER
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JAMA, ISAAK R

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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02/02/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/596,859	NYSTROM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	ISAAK R. JAMA	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. In view of the Appeal Brief filed on 10/14/2009, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/LESTER KINCAID/

Supervisory Patent Examiner, Art Unit 2617

### ***Claim Objections***

2. Claim 23 is objected to because of the following informalities: Claim 23 recites in two occasions the word "centre" ; it is requested that the word be replaced by "center".. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 14-20 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 7,386,306 (Laroia et al.) in view of U.S. Patent Application Publication Number 2003/0169681 (Li et al.).

5. Regarding claims 14, and 23-25, Laroia teaches a method, system, base station and a mobile station in a multicarrier wireless telecommunication system for radio communication between base stations and mobile user stations **[Title]**, comprising the step of: detecting a presence of an acquisition channel by a mobile station for mobile station search purposes; transmitting information signals over the detected acquisition channel, relating to size and location of operational bands of the radio spectrum used by the system **[Columns 4 and 6, lines 50-55 and lines 51-56; i.e. to facilitate mobile node operation in implementations where the system includes cells of different types and which use different numbers of carriers per sector, cell type information is periodically transmitted using broadcast common control channels; and that Signals are normally transmitted by a sector transmitter using a carrier frequency and the corresponding bandwidth, e.g., One or more tones surrounding the carrier frequency. Cells and/or sectors of a cell often use a**

Art Unit: 2617

**frequency band centered around a carrier frequency used by the sector or cell];** wherein the information signals comprise information of the bandwidth **[Figures 19, column 24, lines 33-40; i.e. FIG. 19 is a drawing 1900 illustrating an exemplary bandwidth partition including 3 frequency bands each corresponding to a different carrier in accordance with the present invention. FIG. 19 includes a horizontal axis 1901 illustrating frequency. The bandwidth is partitioned to include (band 1 bandwidth 1908, band 2 bandwidth 1910, band 3 bandwidth 1912), each associated with a corresponding carrier frequency ( $f_1$  1902,  $f_2$  1904,  $f_3$  1906)]** and location, in the spectrum of the operational bands **[Figure 2A, i.e. cluster A as being occupied and the other unshaded clusters as being free]** as part of the information in one or more sub carriers of the bands **[Figure 10 A; shown shaded are the occupied sub-carriers]**. But Laroia does not specifically teach the location in the spectrum of the operational bands. Li teaches a multi-carrier communications with group-based subscriber allocation **[Title]**, whereby the base station selects one or more clusters (i.e. a group of sub-channels) for each subscriber and then notifies the subscriber regarding cluster allocation **[Figure 1B, steps 104 & 105, see also page 3, paragraph 0043]**, in addition, Li teaches that the base station transmits to the subscriber pilot symbols that occupies the entire OFDM frequency bandwidth and showing the used (shaded) and unused (un-shaded) clusters in different cells **[Figures 2A-C, page 5, paragraph 0064]**. Therefore, it would have been obvious to a person of ordinary skill in the art to include the multi-carrier communications with group-based

Art Unit: 2617

subscriber allocation of Li in the method and apparatus of Laroia in order for the base station to inform the mobile station of the available sub-channels.

4. Regarding claim 15, Laroia further teaches that the location information is explicitly signaled or implicitly derivable from synchronization signals **[Figure 1, column 2, lines 29-32; i.e. FIG. 1 is a drawing 100 plotting tone on vertical axis 102 vs time on horizontal axis 104. Each tone represents a segment of bandwidth in the frequency domain]**.

5. Regarding claims 16 and 26, Laroia further teaches that the signaling is received by the mobile user stations which detect the information about available blocks of the spectrum and stores it into a memory **[Figure 7, # 708; column 12, lines 26-35; i.e. Wireless terminal data/information 720 includes user data 732, user/device/session/resource information 734, power information 736, detected beacon signals information 738, carrier frequency information 740, cell/sector information 742, SNR information 744, received/processed deployment configuration information 746, and base station deployment signal evaluation information 748. User data 732 includes data, information and files intended to be sent to/or received from a peer node in a communications]**

6. Regarding claim 17, Laroia further teaches that the size information is repeated regularly in subsequent carriers, or sub-carriers, of the operational band **[Figure 11, #s 1102, 1104 and 1106; the repetition of the showing that the bandwidth is 1.25 MHz]**.

Art Unit: 2617

7. Regarding claim 18, Laroia further teaches that the information comprises the start and stop frequencies of the band and, thereby, the bandwidth **[Figure 11, see for example 1102 showing the beginning and the end of the bandwidth]**.

8. Regarding claim 19, Laroia further teaches that the information comprises an identifying number representing the size and location of available operational bands **[[Figure 11, #s 1102, 1104 and 1106; that the bandwidth is 1.25 MHz]**.

9. Regarding claim 20, Laroia further teaches that the mobile user stations repeatedly scan the information signaling for updating its memory about changing conditions relating to the operational bands **[column 3, lines 51-60; i.e. The beacon detection routine 730 detects and identifies beacons signals from different cells and/or sectors transmitted within the same carrier frequency band that the WT 700 is tuned for to receive ordinary downlink signaling, traffic channel signals]**.

10. Regarding claim 22, Li further teaches a mobile user station requests access to a multicarrier band with N carriers **[Figure 1A]** for downloading information, comprising the steps of: the mobile station searching the radio interface for an N-carrier band by looking for location and size information; the communication system assigning a free band with  $N+\epsilon$  carriers to the mobile upon the request where  $\epsilon$  is zero or a small number compared to N; and, the mobile station downloads the information **[page 3, paragraph 0040; i.e. N= 512 sub-carriers, and  $\epsilon$  being zero]**.

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over over U.S. Patent Number 7,386,306 (Laroia et al.) in view of U.S. Patent Application

Art Unit: 2617

Publication Number 2003/0169681 (Li et al.) and further in view of U.S. Patent Number 6,650,655 (Alvesalo et al.).

11. Regarding claim 21, Laroia and Li has been discussed above in regard to claim 14, but Li fails to teach that the operational bands belong to different network operators and wherein the subscribers of an operator may partly or wholly have access to the operational bands of another operator. Alvesalo teaches a system and method for allocating transmission resources between different networks where the available bandwidth is shared among the different networks **[Figure 2, column 11, lines 29-34]**. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the resource allocation system of Alvesalo in the combined systems of Laroia and Li in order for the mobiles in the system to have a seamless communication.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Application Publication Number 2004/0253952 (Rager et al.) teaches a communication service searching in multi-band wireless communications devices and methods. U.S. Patent Number 6,377,787 (Bamburak et al.) teaches a method for categorization of multiple providers in a wireless communications service environment. U.S. Patent Application Publication Number 2002/0031189 (Hiben et al.) teaches time and bandwidth scalable slot format for mobile data systems.



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571)270-5887. The examiner can normally be reached on Monday-Thursday; 4-10.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/IRJ/

/LESTER KINCAID/  
Supervisory Patent Examiner, Art Unit 2617